

WHAT IS CLAIMED IS:

1. A thermally energy efficient vehicle comprising:

a vehicle structure, wherein said vehicle structure includes generally interconnected structural members that form a frame for the vehicle and generally planar interconnected panels that define a shape of the vehicle;

a low transmittance glass window positioned within the vehicle structure, wherein said low transmittance glass window increases a thermal resistance of the vehicle; and

an energy efficient thermal management system providing exterior thermal management and interior thermal management for the vehicle, wherein said energy efficient thermal management system consumes less thermal energy as a result of the increased thermal resistance of the vehicle.

2. A thermally energy efficient vehicle as set forth in claim 1 wherein a thermally efficient structural material is utilized for a structural member, to reduce a thermal mass of said structural member.

3. A thermally energy efficient vehicle as set forth in claim 1 wherein an energy efficient insulator is attached to a portion of said vehicle structure to increase a thermal resistance of the vehicle.

4. A thermally energy efficient vehicle as set forth in claim 3 wherein said energy efficient insulator provides a thermal barrier and an acoustic barrier.

5. A thermally energy efficient vehicle as set forth in claim 3 wherein said energy efficient insulator is a gas-filled panel.

6. A thermally energy efficient vehicle as set forth in claim 1 wherein said low transmittance glass window includes two parallel sheets of glass separated by an air gap, to improve a thermal resistance of the low transmittance glass.

7. A thermally energy efficient vehicle as set forth in claim 6 wherein said low transmittance glass includes a solar reflective film attached to an outside surface of one of the two parallel sheets of glass.

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structural member, to reduce a thermal mass of the vehicle;

a low transmittance glass window positioned within the vehicle structure, wherein said low transmittance glass window includes two parallel sheets of glass separated by an air gap, to increase a thermal resistance of the vehicle; and

an energy efficient thermal management system providing exterior thermal management and interior thermal management for the vehicle, wherein a thermal energy consumption capacity of said energy efficient thermal management system is decreased since said energy efficient thermal management system consumes less thermal energy resulting from the increased thermal resistance and reduced thermal mass of the vehicle.

12. A thermally energy efficient vehicle as set forth in claim 11 wherein an energy efficient insulator is attached to a portion of said vehicle structure to increase a thermal resistance of the vehicle.

13. A thermally energy efficient vehicle as set forth in claim 12 wherein said energy

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efficient insulator provides a thermal barrier and an acoustic barrier.

14. A thermally energy efficient vehicle
5 as set forth in claim 13 wherein said energy
efficient insulator is a gas-filled panel.

15. A thermally energy efficient vehicle
as set forth in claim 11 wherein said low
10 transmittance glass includes a solar reflective film
attached to an outside surface of one of the two
parallel sheets of glass.

16. A thermally energy efficient vehicle
15 as set forth in claim 11 wherein said low
transmittance glass includes a desiccant material
disposed within the air gap between the two parallel
sheets of glass.

20 17. A thermally energy efficient vehicle
as set forth in claim 11 wherein the two parallel
sheets of glass are made from a glass/polycarbonate
composite material.

25 18. A thermally energy efficient vehicle
comprising:

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a vehicle structure, wherein said vehicle structure includes generally interconnected structural members that form a frame for the vehicle and generally planar interconnected panels that define a shape of the vehicle, wherein a thermally efficient structural material is utilized for a structural member, to reduce a thermal mass of the vehicle;

an energy efficient insulator attached to a portion of said vehicle structure to increase a thermal resistance of the vehicle

a low transmittance glass window positioned within the vehicle structure, wherein said low transmittance glass window includes two parallel sheets of glass separated by an air gap, to increase the thermal resistance of the vehicle; and

an energy efficient thermal management system providing exterior thermal management and interior thermal management for the vehicle, wherein a thermal energy consumption capacity of said energy efficient thermal management system is decreased since said energy efficient thermal management system consumes less thermal energy resulting from the increased thermal resistance and reduced thermal mass of the vehicle.

19. A thermally energy efficient vehicle as set forth in claim 18 wherein said energy efficient insulator provides a thermal barrier and an acoustic barrier.

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20. A thermally energy efficient vehicle as set forth in claim 18 wherein said energy efficient insulator is a gas-filled panel.